

Long hand method:

$$L0 = 0.3 \quad \text{Theta0} = 0.4 \text{ radians}$$

$$L1 = 0.2 \quad \text{Theta1} = 0.6 \text{ radians}$$

$$L2 = 0.1 \quad \text{Theta2} = 1.2 \text{ radians}$$

$$X0 = L0 * \cos(\text{Theta0}) = 0.2763$$

$$Y0 = L0 * \sin(\text{Theta0}) = 0.1168$$

$$X1 = X0 + L1 * \cos(\text{Theta0} + \text{Theta1}) = 0.3844$$

$$Y1 = Y0 + L1 * \sin(\text{Theta0} + \text{Theta1}) = 0.2851$$

$$\mathbf{X2 = X1 + L2 * \cos(\text{Theta0} + \text{Theta1} + \text{Theta2}) = 0.3255}$$

$$\mathbf{Y2 = Y1 + L2 * \sin(\text{Theta0} + \text{Theta1} + \text{Theta2}) = 0.3659}$$

$$\mathbf{Z2 = 0 \text{ (because we don't go in z direction)}}$$